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*A  
(amended)*

Please add the following new claims:

--21. The method of printing a paste according to Claim 14, wherein said paste removing member includes a protrusion extending from a surface of said plate.

22. The plate for printing according to Claim 1, wherein said paste removing protrusion extends from said mask's non-opening area

### REMARKS

#### **I. OBJECTION TO THE SPECIFICATION AND CLAIMS**

The Examiner has objected to the specification and claims for minor informalities. In order to expedite prosecution, Applicants have amended the referenced portions of the specification and claims as requested by the Examiner. It is noted however that with respect to claim 18, the insertion of --a-- before "squeegees" does not appear to be grammatically correct. If maintained, clarification of the objection to claim 18 is respectfully requested. Accordingly, it is respectfully requested that the objection to the specification and claims be withdrawn.

#### **II. DRAWINGS**

Enclosed herein for the Examiner's approval is a proposed drawing amendment labeling Figures 8-11 as "Prior Art", with changes shown in red-ink. Accordingly, it is respectfully requested that the objection to the drawings be withdrawn.

**III. CLAIMS 8, 11, 12 AND 20 ARE DEFINITE**

It is respectfully submitted that claims 8, 11, 12 and 20, as amended, are definite within the meaning of 37 C.F.R. § 1.75(a) and 35 U.S.C. § 112, second paragraph. Accordingly, it is respectfully requested that the objection/rejection thereto be withdrawn.

**IV. CLAIMS 1 AND 20 ARE PATENTABLE OVER THE CITED PRIOR ART**

Claim 1 stands rejected under 35 U.S.C. § 102 as being anticipated by Hamada et al., Kashio, and Erdmann; and claim 20 stands rejected under 35 U.S.C. § 102 as being anticipated by Kashio and under 35 U.S.C. § 103 as being unpatentable over Hamada et al.. These rejections are respectfully traversed for the following reasons.

With respect to Hamada et al., the Examiner relies on the surface of the printing screen S as the paste removing member. It is respectfully submitted that the surface of the screen S is not a "*protrusion* extending from a surface of said plate" as recited in claims 1 and 20. With respect to Kashio and Erdmann, the Examiner relies on element 18 and 24, respectively, as the paste removing member. It is respectfully submitted that element 18 and 24 do not extend "from a surface of said plate" as recited in claims 1 and 20. That is, element 18 and 24 form part of the printing device rather than the printing screen 4 and S, respectively.

As anticipation under 35 U.S.C. § 102 requires that each and every element of the claim be disclosed in a single prior art reference, *Akzo N.V. v. U.S. Int'l Trade Commission*, 808 F.2d 1471 (Fed. Cir. 1986), and because none of Hamada et al., Kashio, and Erdmann disclose or suggest, *inter alia*, a "protrusion extending from a surface of said plate" as recited in claims 1 and 20, it is submitted that Hamada et al., Kashio, and Erdmann do not anticipate claims 1 and 20, nor any claim dependent thereon.

Based on the foregoing, it is respectfully submitted that claims 1 and 20 are patentable over the cited prior art. Accordingly, it is respectfully requested that the rejections of claims 1 and 20 under 35 U.S.C. § 102 (as well as the rejection of claim 20 under § 103), be withdrawn.

**V. CLAIM 13 IS PATENTABLE OVER THE CITED PRIOR ART**

Claim 13 stands rejected under 35 U.S.C. § 102 as being anticipated by Kashio. This rejection is respectfully traversed for the following reasons.

Claim 13 recites in pertinent part, "a paste removing member formed of a flat area and a slanting area, both together *constituting a side of said plate framework*" (emphasis added). In contrast, the alleged paste removing member 18 of Kashio constitutes a part of the printing device rather than the printing screen 4.

As anticipation under 35 U.S.C. § 102 requires that each and every element of the claim be disclosed in a single prior art reference, *Akzo N.V. v. U.S. Int'l Trade Commission*, 808 F.2d 1471 (Fed. Cir. 1986), and because Kashio does not disclose or suggest, *inter alia*, "a paste removing member formed of a flat area and a slanting area, both together constituting a side of said plate framework" as recited in claim 13, it is submitted that Kashio does not anticipate claim 13.

Based on the foregoing, it is respectfully submitted that claim 13 is patentable over the cited prior art. Accordingly, it is respectfully requested that the rejection of claim 13 under 35 U.S.C. § 102, be withdrawn.

## VI. CLAIM 14 IS PATENTABLE OVER THE CITED PRIOR ART

Claim 14 stands rejected under 35 U.S.C. § 102 as being anticipated by Hamada et al. and Erdmann. This rejection is respectfully traversed for the following reasons.

Claim 14 recites in pertinent part "a step of removing a paste located at a squeegee's **non**-printing side by means of said paste removing member **before** printing is started." In contrast, both Hamada et al. and Erdmann disclose removing paste on the squeegee's printing side. With respect to Hamada et al., Figures 3(a)-3(c) show the printing side of the squeegee which picked up paste SP during printing, as evidenced by the arrangement of the squeegee 8 with respect to the head 9. That is, the side which picked up the paste SP would necessarily be the printing side because it is arranged to engage the surface of the screen S, whereas the opposing non-printing side is not. With respect to Erdmann, Figures 5-7 clearly show the tray 24 on the printing side of the squeegee 46. In fact, neither Erdmann nor Hamada et al. even show paste on the non-printing side of the squeegee, and are completely silent as to the problems associated therewith. Only Applicants' have considered such a problem (*see* pages 1-4 of Applicants' specification and corresponding Figures 8-11) and the means by which to solve said problem.

In addition, both Hamada et al. and Erdmann *expressly* disclose removing the paste *after* printing (*see* English translation of Abstract for Hamada, first line of paragraph under section entitled SOLUTION; and last line of Abstract for Erdmann). ?

As anticipation under 35 U.S.C. § 102 requires that each and every element of the claim be disclosed in a single prior art reference, *Akzo N.V. v. U.S. Int'l Trade Commission*, 808 F.2d 1471 (Fed. Cir. 1986), and because neither Hamada et al. nor

Erdmann disclose or suggest, *inter alia*, "a step of removing a paste located at a squeegee's non-printing side by means of said paste removing member before printing is started" as recited in claim 14, it is submitted that Hamada et al. and Erdmann do not anticipate claim 14, nor any claim dependent thereon.

Based on the foregoing, it is respectfully submitted that claim 14 is patentable over the cited prior art. Accordingly, it is respectfully requested that the rejections of claim 14 under 35 U.S.C. § 102, be withdrawn.

## **VII. DEPENDENT CLAIMS**

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as claims 1 and 14 are patentable for the reasons set forth above, it is respectfully submitted that all claims dependent thereon are also patentable. In addition, it is respectfully submitted that the dependent claims are patentable based on their own merits by adding novel and non-obvious features to the combination. Based on the foregoing, it is respectfully requested that the rejections of claims 2-12 and 15-19 under 35 U.S.C. § 102 and 103, be withdrawn.

## **VIII. CONCLUSION**

Having fully and completely responded to the Office Action, Applicants submit that all of the claims are now in condition for allowance, an indication of which is

respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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## APPENDIX

### IN THE SPECIFICATION

The paragraph beginning on page 3, line 1 has been amended as follows:

--A description is further given to the method for filling conductive paste 24 with reference to Fig. 9, Fig. 10 and Fig. 11(a) to Fig. 11(g). A squeegeeing method is used to fill conductive paste 24. However, since mask films 22a and 22b designed specifically for use with prereg sheet 21 are put in place, mask 2, which is formed of stainless steel, measuring about 3 mm in thickness and provided with an opening of an area of 250 mm by 450 mm larger than the effective paste filling area of prereg sheet 21, is mounted on plate framework 1 of a plate for printing 10 for paste filling as Fig. 9 and Fig. 10 show. A slanting area with [an] a slanting angle about 15 ° is provided in opening 4 of mask 2 in the squeegee's forward moving direction (at the 450 mm side) for the whole purpose of facilitating the passage of the squeegee.--

The paragraph beginning on page 8, line 1 has been amended as follows:

--A slanting area with a slanting angle of about 15° is provided on opening 4a of mask 2 in the squeegee's forward moving direction (at the side of 450 mm) for the whole purpose of facilitating the passage of a squeegee. On non-opening area 4b of mask 2, there is provided stainless [steal] steel paste removing member 3, the surfaces of which realize a high degree of smoothness by buffing and the like and are formed of flat area 3a and slanting area 3b with a slanting angle of 35°. The high degree of smoothness achieved on the surfaces of paste removing member 3 is intended for preventing the wear

of the squeegee from occurring and is expected to be almost at the same level as that of the surfaces of mask 2 in the present exemplary embodiment.--

The paragraph beginning on page 16, line 3 has been amended as follows:

--Although stainless steel is used as the mask material in the foregoing, it is possible to assume easily that the same effects can also be expected by using such high polymer materials as [teflon] polytetrafluoroethylene (i.e., "TEFLON"), nylon and the like as the mask material.--

IN THE CLAIMS

1. (Amended) A plate for printing comprising:

a mask with an opening area and a non-opening area;  
a plate framework with at least four sides, on which said mask is fixed; and  
a paste removing [member] protrusion extending from a surface of said plate.

2. (Amended) The plate for printing according to Claim 1, wherein said paste removing [member] protrusion is so structured as to have a flat area and a slanting area.

3. (Amended) The plate for printing according to Claim 1, wherein said paste removing [member] protrusion is disposed on said mask's non-opening area.

4. (Amended) The plate for printing according to Claim 1, wherein said paste removing [member] protrusion is disposed on a printing start side or on a side opposite to said printing start side thereof.
5. (Amended) The plate for printing according to Claim 1, wherein said paste removing [member] protrusion is disposed on a printing start side and a side opposite to said printing start side, respectively.
6. (Amended) The plate for printing according to Claim 1, wherein said paste removing [member] protrusion is disposed on a side of said plate framework that is perpendicular to a squeegee's forward moving direction.
7. (Amended) The plate for printing according to Claim 6, wherein said paste removing [member] protrusion is formed in a one-piece structure with a side of said plate framework.
8. (Amended) The plate for printing according to Claim 7, wherein a spacing between said paste removing [member] protrusion and said side of said plate framework is sealed with resin [and the like].
9. (Amended) The plate for printing according to Claim 1, wherein a degree of surface smoothness of said paste removing [member] protrusion is equal to or higher than a degree of surface smoothness of said mask.

10. (Amended) The plate for printing according to Claim 1, wherein a coefficient of friction of said paste removing [member] protrusion is equal to or smaller than that of said mask.
11. (Amended) A printing device having a squeegee couplable to the [The] plate for printing according to Claim 1, wherein said paste removing protrusion includes a slanting area such that a length of said slanting area is made same as or longer than the squeegee's thickness.
12. (Amended) A printing device having a squeegee couplable to the [The] plate for printing according to Claim 1, wherein said paste removing protrusion includes a slanting area such that a slanting angle of said slanting area is made almost same as an angle complementary to the squeegee's printing angle.
13. (Amended) A plate for printing comprising:
  - a mask with an opening area and a non-opening area;
  - a plate framework with four sides, on which said mask is fixed; and
  - a paste removing member formed of a flat area and a slanting area, both together constituting a side of said plate framework that is perpendicular to a squeegee's moving forward direction.

14. (Amended) A method of printing a paste on an object to be printed with said paste by means of [said] a plate [for printing according to Claim 1,] comprising: a mask with an opening area and a non-opening area; a plate framework with at least four sides, on which said mask is fixed; and a paste removing member, said method comprising a step of removing a paste located at a squeegee's non-printing side by means of said paste removing member before printing is started.

20. (Amended) A printing device couplable to a [A] plate for printing that has a paste removing [member] protrusion extending from a surface of said plate disposed in such a way that at least a moving back squeegee of said printing device passes said paste removing member when two squeegees of moving forth and moving back are used in printing a paste.